Delhi.

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- Pacione, M (2001) Urban Geography: A Global Perspective, Routledge, New York
- Ramachandran, R. (2010) Urbanisation and Urban Systems of India, Oxford University Press, New Delhi.
- Rao, B.P. and Sharma, N (2007) Nagariya Bhoogal, Vasundhara Prakashan, Gorakhpur.
- Singh, R.Y. (2009) The Geography of Settlement, Rawat Publication, New Delhi.
- Singh, R.L., Singh, K. N. and Singh, Rana P.B., (eds.) (1975) Readings in Rural Settlement Geography, National Geographical society of India, Varanasi. S

Web link:
https://rural.nic.in/sites/default/files/SAGY_Guidelines_English.pdf
http://nir+dpr.org.in/nird_docs/sagy/sankalan-part1.pdf

GENERAL ELECTIVE – DYNAMICS OF URBAN SYSTEMS (GE 22)

Course title & Code	Credits	Duration (Hrs per week)			Eligibility Criteria	Prerequisite
		Lecture	Tutorial	Practical/ Practice		
Dynamics of Urban Systems	**4**	**3**	**1**	**0**	**Class 12th**	**NIL**

Learning Objectives: The Course addresses SDG 11 Sustainable cities and communities. It aims specifically

- To critically understand the complexities of urban systems in the global context.
- To Learn about the broad range of Physical System Dynamics global cities face today.
- To provide a understanding of transformations cities are going through.
- To explore the future perspectives of urban development.

Learning Outcomes:

- Students will learn historical context of urban system and hierarchies.
- The learning about urban growth dynamics of sprawl, spatial segregation and linkages.
- Understanding the digital and ecological transformations in cities.
- Learn about the urban development modelling.
- Understand futuristic urbanization, effective planning and policy interventions.

Course Outline:

- **UNIT 1: Introduction**: Concept of Urban Systems; Historical Context to Urban System; Approaches to Geographies of Urbanization; Hierarchies, Sphere of Influence and Urban Systems
- **UNIT 2: Physical System Dynamics**: Urban Growth andLandUse;Slums; Spatial Segregation; Gentrification; Dimensions of Urban Displacement;Peri-urban Development; Urban Spatial Linkages
- **Unit 4: Urban Development Modelling:** Fuzzy Logic; SLEUTH Model; Stage Model of Urban Environmental Evolution
- **Unit 3: Urban Transformations and Urban Futures (15 hours):** urban transformations driven by changes in transportation; Housing; Economy- emergence of digital economies, Urban Futures- Inclusive Cities; Resilient Cities; Sustainable cities (Detailed concept and one case study of Gurgaon (India) and Barcelona (Spain)

Tutorial Exercise:

Discussions on specific reading and focused on SDG 11 Sustainable cities and communities

Readings:

- Bai, X. and Imura, H..2000. A Comparative Study of Urban Environment in East Asia: Stage Model of Urban Environmental Evolution, International Review for Environmental Strategies, 1(1), pp. 135–158.
- Bhattacharya, B. 2006. Urban Development in India since Pre-Historic Times, Concept Publishing Company, New Delhi.
- Brunn, S.D., Hays-Mitchell, M., Ziegler, D.J. 2012. Cities of the World: World Regional Urban Development, Rowman and Littlefield Publishers: England
- Carter,H.2010.TheStudyofUrbanGeography,ArnoldPublishersLondon
- Fyfe, N.R and Kenny, J.T. 2005. The Urban Geography Reader, Routledge: London and New York.
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- Hall, P. 2001. Cities in Civilization: Culture, Innovation and Urban Order, Phoenix.
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- Latham, A., McCormick, D., McNamara, K., and McNeil, D. 2009. Key Concepts in Urban Geography, Sage: London, California, New Delhi, Singapore.
- Liu, Y., 2008. Modelling urban development with geographical information systems and

cellular automata. CRC Press.

- Maitra, A. K. 2000. Urban Environment in Crisis, New Age International Publishers, New Delhi.
- Misra, R.P. (ed.) 2013. Urbanization in South Asia: Focus on Mega Cities, Cambridge University Press, New Delhi
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- Roberts, P., Ravetz, J. and George, C. 2009. Environment and the City. Routledge, London
- Sassen, S (ed.) 2002. Global Network, Linked Cities, New York: Routledge.
- Scott, A.J. 2002. Global City-Regions: Trends, Theory, Policy, Oxford: OUP.
- Sharma,P. and Rajput,S. 2017. Sustainable Smart Cities in India: Challenges and Future Perspectives. Springer International Publishing, Switzerland
- Singh, K. and Steinberg, F.M. 1996. Urban India in Crisis, New Age International Limited Publications, New Delhi.
- Singh, R. B. (ed) 2015. Urban Development Challenges, Risks and Resilience in Asian Mega Cities, Springer, Japan.